

**DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION**

6H3 Sheet 1 McCULLOCH MC-4C (USAF YH-30) April 14, 1953

HELICOPTER SPECIFICATION NO. 6H3

Manufacturer McCulloch Motors Corporation
 Los Angeles, California

I - Model MC-4C, 2PCLH, Approved February 17, 1953

Engine	Aircooled Motors Franklin 6A4-200-C6	
Fuel	91 min. octane aviation gasoline	
Engine limits for all operations	Maximum rpm 3100 full throttle (200 hp)	
Rotor limits and engine operating speeds	Power off (Rotor Tach.) Maximum 508 Minimum 400	Power on (Engine Tach.) Maximum 3100 rpm Minimum 2900 rpm
Airspeed limits	Vne (Never exceed) 90 mph (78 knots) CAS (S.L. to 7000 ft.) (Above 7000 ft. reduce Vne 4 mph per 1000 ft.)	
Altitude limits	Avoid slow operation between 10 ft. and 325 ft. above ground surface. (See Approved Flight Manual)	
C.G. range	(93.5) to (98.0)	
Empty weight C.G. range	None	
Datum	Station 0 (160 in. forward of the fuselage jig point)	
Leveling means	Brackets on aft fuselage tubes near Station 174	
Maximum weight	2300 lbs.	
No. of seats	2 (55)	
Maximum baggage	200 lbs. (98.5) (40 lbs. per sq. ft.)	
Fuel capacity	35 gals. (93) (34 gals. usable) (See NOTE 1 for data on "System Fuel and Oil")	
Oil capacity	8.8 qts. (128) (6.8 qts. usable)	
Rotor blade movements	For Rigging information refer to the Maintenance Manual	
Serial Nos. eligible	1000 and up.	
Required equipment	Item 1, 2, 102, 103, 104, 105, 106, 107, 201, 202, 205, 206, 301, 302, 303, 304, 305, 401, 404.	

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Specifications Pertinent to All Models

Certification basis	Type Certificate No. 6H3 (CAR 6, May 24, 1946)
Production basis	None. Prior to original certification a CAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data and a check of the flight characteristics.
Export eligibility	Eligible for export to all countries subject to the provisions of ASR No. 312 (MOP 2-4 contains same information).

Equipment:

Rotors and Rotor Equipment

1.	3 Blades forward		
	(a) McCullough Dwg. 22113-5	53 lbs.	(2.5)
2.	3 Blades aft		
	(a) McCullough Dwg. 22113-7	53 lbs.	(194.5)
3.	Rotor brake installation per McCullough Dwg. No. 27621	Use actual weight	

Engine and Engine Accessories - Fuel and Oil Systems

101.	Omitted		
102.	Starter		
	(a) Delco-Remy 1109662	18 lbs.	(109)
103.	Cooling fan, McCulloch Dwg. No. 22540	12 lbs.	(146)
104.	Oil cooler		
	(a) McCullough Dwg. No. 27507 (Modified Harrison 8518115)	9 lbs.	(137)
105.	Carburetor air heater, McCullough Dwg. No. 27545	1 lb.	(116)
106.	System fuel and oil (See NOTE 1 for definition)	4 lbs.	(120)
107.	Unusable fuel (See NOTE 1 for definition)	6 lbs.	(93)

Landing Gear

201.	2 Main wheel-brake assemblies, 5.00-4, Type III		
	(a) Goodrich Model 451M	10 lbs.	(127)
	Wheel assembly No. D-3-142M		
	Brake assembly No. D-2-113		
202.	2 Main wheel 4 ply-rating tires, 5.00-4, Type III (with regular tubes)	13 lbs.	(127)
205.	1 Nose wheel, 10", Type I		
	(a) Goodrich B-3-41A	2 lbs.	(33)
206.	1 Nose wheel 6 ply-rating tire, 10.00", Type I (with regular tube)	4 lbs.	(33)

Electrical Equipment

301.	Generator		
	(a) McCullough Dwg. No. 27533 (modified Pierson B-2450)	23 lbs.	(137)
302.	Battery		
	(a) AN 3151-2	56 lbs.	(106)
303.	Voltage regulator		
	(a) AN1C42-5 (Eclipse Bendix Type 1042-5)	4 lbs.	(117)
304.	Generator cutout		
	(a) BuAer E-1600-1	3 lbs.	(116)
305.	Lighting system installation per McCullough Dwg. Nos. 22828 and 22844	Use actual weight	

Interior Equipment

- 401. McCulloch Motors Aircraft Division Model MC-4C CAA
approved Rotorcraft Flight Manual dated February 17, 1953.
- 402. McCullough MC-4C Manual of Maintenance Instructions.
- 404. 2 Safety belts
 - (a) Brown-line WB2000 2 lbs. (59)
- 405. 2 Cabin doors - McCulloch Dwg. No. 22975 23 lbs. (47)

NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions must be in each helicopter at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system). Ballast, when necessary, must be carried in accordance with Loading Instructions in the Approved Flight Manual.

Fuel and oil capacities as indicated are total tank capacities over and above "System Fuel and Oil." The fuel tank capacity includes "unusable" fuel of one gallon, which cannot be used safely in all flight attitudes, and which must be included in the empty weight.

"System Fuel and Oil", which must be included in the empty weight, is that amount required to fill the fuel system and tank up to the tank outlet to the engine, plus the oil required to fill the oil cooler and lines.

NOTE 2. The following placards must be installed in full view of the pilot:

- (a) At aft end of center floor board:
 - "(1) Notice - - This helicopter must be operated in compliance with the operating limitation specified in the CAA Approved Rotorcraft Flight Manual.
 - (2) Instrument Flight prohibited.
 - (3) Acrobatic maneuvers prohibited.
 - (4) Solo from right seat only.
 - (5) Nose wheel ground contact speeds in excess of 20 mph prohibited.
 - (6) Do not hit blade stops in ground operation by excessive use of lateral and directional controls.
 - (7) Avoid rapid cycling of the longitudinal control."
- (b) On instrument panel next to airspeed indicator:
 - "(1) Above 7000 ft. reduce Vne 4 mph per 1000 ft."

NOTE 3. Information essential to the proper maintenance of the helicopter including retirement times of critical parts is included in the manufacturer's maintenance instructions provided with each rotorcraft. The helicopters must be serviced and maintained in conformance with these instructions.

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